C2 - Python for Data Science

C-DAT-100

HTTP Server

Making an API from data

1.0

{EPITECH.}

HTTP Server

delivery method: py05 on Github
language: python

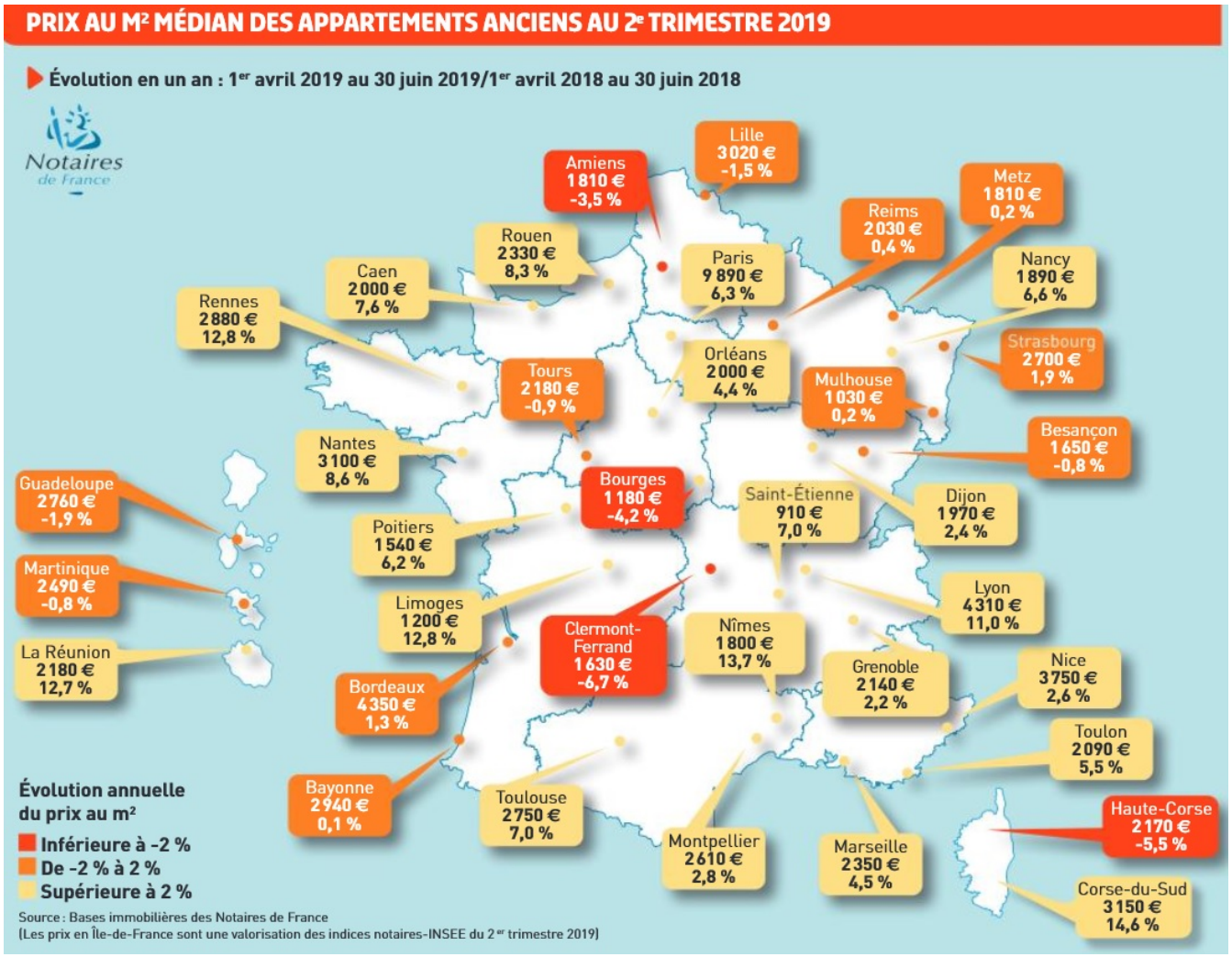
When working on DATA / AI, even if you're not a web developper, you'll have to create (RESTfull) APIs around your pandas dataframe.

DATASET

This dataset contains the value in euro of **houses and appartments sold in France in 2019** as part of open-data initiative.

For some legal reasons, Alsace, Moselle and Mayotte didn't share theirs data.

Download : **https://www.data.gouv.fr/fr/datasets/demandes-de-valeurs-foncieres/**



EXERCISE 01

Use only **ONE** pandas dataframe.
Create these functions :

- **get_departments** returns all departments id

- **get_postal_code** returns all postal code

- **get_department_housing(department_id)** returns all usefull informations (date sold, type, price, square meter) of houses and apartments sold in this department

- **get_postal_code_housing(postal_code)** same in this postal code.

EXERCISE 02

Using **Flask** create an API according to these routes.

GET /departments

GET /postal_codes

GET /departments/{department_id}

GET /departments/{department_id}/postal_codes/

GET /departments/{department_id}/postal_codes/{postal code}

QUERY PARAMS

The user of your API can specify filters in his GET requests such as :
- sqm_min
- sqm_max
- type
- room_min
- room_max

EXEMPLE

GET /departments/69/postal_codes/69003?room_min=2&room_max=3&sq_min=35

PLOTTING

Adding /plot at the end of a route returns an plot of the mean value.

EXEMPLE

GET /departments/69/postal_codes/69003/plot?room_min=2&room_max=3&sq_min=35